

South Carolina Department of Health and Environmental Control (SC DHEC)

Bureau of Air Quality (BAQ)

Response to Comments

Public Notice #17-055-CM-C

Southern Asphalt

3370 Mount Pisgah Cemetery Road Conway, South Carolina

Air Quality Permit No. 9900-0474-CB

The following is the SC DHEC BAQ's response to comments made during the permitting period beginning October 27, 2017 through November 25, 2017 regarding the synthetic minor source construction permit application for Southern Asphalt, located at 3370 Mount Pisgah Cemetery Road in Conway, Horry County, South Carolina. Because this permit is being issued to a minor source of air emissions, no formal public comment period was required by regulations. On January 11, 2018, SC DHEC held a public meeting in Conway, SC. During the meeting, SC DHEC made a presentation about the project and conducted a question and answer session. SC DHEC has considered the comments from the community and has responded below.

SC DHEC's decision, permit, statement of basis, this response document, and a letter of notification to citizens who submitted comments or asked to be notified of the decision are available for viewing at the SC DHEC Columbia office located at 2600 Bull Street, Columbia, South Carolina 29201, or our webpage at <http://www.scdhec.gov/Environment/AirQuality/PermittingDecisions/>.

Hardcopies of all the above-listed documents, as well as the written comments received can be requested by contacting our Freedom of Information Office at (803) 898-3882. The following is a summary of all comments submitted and SC DHEC's response.

Diesel Retrofits - A comment referred to a previous request for the implementation of diesel retrofit kits. According to the commenter, at that time, SC DHEC provided the retrofits free of charge to reduce diesel emissions from plant truck traffic.

The Diesel Emissions Reduction Act (DERA) grant program is designed to fund projects to help meet local air quality needs through clean diesel technology. This program is voluntary and SC DHEC cannot require a facility to participate. The EPA provides the funding and SC DHEC administers the grant program. The retrofits are not free; there is a matching funds requirement. Currently, there is no funding available although we anticipate the EPA may have funds available in late 2018. Grants are available to eligible counties, cities, other local

government entities, private organizations, businesses, and universities. For more information, please visit www.scdhec.gov/DERA.

Weather Conditions - A comment referred to a previous request to consider weather conditions to determine when the plant should be operated in order to prevent polluted air inversions and ozone hot spots.

Weather conditions are an element of the facility's air dispersion modeling demonstration that was submitted and approved by SC DHEC for the permit application. An EPA-approved model was used to predict the pollutant concentrations at the facility's property boundary and beyond. This modeling used National Weather Service meteorological data from the nearby North Myrtle Beach airport covering a consecutive five-year period. This meteorological data contains conditions that will be representative of the different types of weather that will influence the dispersion of pollutant emissions from the facility, including inversions. The model also assumed the facility will operate at maximum (100%) capacity 24 hours per day, 7 days a week. The model predicted the worst-case ambient pollutant concentrations resulting from the project will be below all applicable health-based air quality standards.

The facility is not expected to emit any ozone. The expected nitrogen oxide (NOx) and volatile organic compound (VOC) emissions – which are ozone precursor emissions – are significantly below the rates that would cause a 1 part-per-billion (ppb) increase in ambient ozone concentrations. Thus, emissions from the project will not cause or contribute to an exceedance of the ozone National Ambient Air Quality Standard.

There was also a comment asking how sea breezes affected the modeling data. As mentioned above, the air dispersion modeling demonstration was performed using National Weather Service meteorological data from the nearby North Myrtle Beach airport covering a consecutive five-year period. This meteorological data contains conditions that will be representative of the different types of local weather that will influence the dispersion of pollutant emissions from the facility, including sea breezes. Therefore, the model accounted for the sea breezes when it demonstrated that the ambient air concentrations from the project will be below all applicable health-based air quality standards.

Fire Protection - A comment referred to a previous request for a foam truck to be on site to protect the surrounding community, which has had a history of fire, from highly combustible materials. The commenter also stated that they understand that Horry County Fire and Rescue has an additive for its standard water trucks to create foam, but questioned if this would be sufficient to protect nearby homes under windy and dry conditions. The commenter also questioned if fire hydrants are considered for hot mix asphalt (HMA) plants.

There are no applicable state or federal air quality requirements that require fire-fighting capabilities for asphalt facilities. Horry County Emergency Management has confirmed that

it believes that its ability to respond to any fire at the proposed facility is adequate but will consider the fire safety comments. Any future comments or questions regarding fire protection coverage should be directed to Horry County Fire and Rescue.

Shroud House - A comment referred to a previous request for a shrouding house to be used to control fugitive emissions and reduce toxic fumes released into neighboring communities.

The facility is required to have a fugitive dust control plan for controlling fugitive emissions from process operations, truck traffic on roadways owned or controlled by the owner/operator and any other on-site operations where fugitive dust emissions can be generated. Shrouding is not required; however, a facility may consider shrouding as a control option if a fugitive source needs further fugitive emission control. This type of option would be addressed in the facility-wide fugitive plan. During compliance inspections (or complaint investigations), a Department representative will inspect the site for any excess fugitive emission releases, review visual emission inspections records and review the fugitive plan to ensure it has been adhered to. If SC DHEC observes significant occurrences of fugitive emission releases, it can require that the fugitive dust plan be revised to address the issue. Please refer to permit condition C.7 for more details on the fugitive dust plan.

Ozone monitoring in Horry County - A comment indicated concerns about the lack of Ozone monitoring in Horry County.

SC DHEC operates an ambient air monitoring station in Horry County that measures ozone. Although this may seem far away, the monitor siting is designed to represent a broad area which includes Myrtle Beach, Conway, North Myrtle Beach, and Brunswick County, NC. The monitor currently shows compliance with the ozone standard. The data from this monitoring site is reviewed regularly by SC DHEC to ensure compliance is maintained. The monitoring data is available at the following website: <https://www.epa.gov/outdoor-air-quality-data>.

The monitoring that is currently being done and is planned for South Carolina is described in the Annual Ambient Network Monitoring Plan. The Monitoring Plan is available at <http://www.scdhec.gov/HomeAndEnvironment/Air/AmbientAir/>. The monitoring plan indicates that the scale of the Coastal Carolina ozone monitor represents Urban scale concentrations of ozone. Urban scale represents citywide or equivalent rural areas. Each monitor or sampler in the monitoring network is described in terms of the approximate physical dimensions of the air parcel nearest the monitoring station throughout which pollutant concentrations are expected to be reasonably similar. This is most often referred to as the scale of the monitor.

There was also a comment about the ozone spike at the Horry County ozone monitor. The ozone spike occurred on May 10, 2017. At that time, fires throughout Florida and Georgia were producing heavy amounts of smoke. Winds pushed the air mass and smoke towards the coastal area.

In 2008, in response to community concerns about the relocation of Southern Asphalt to its current location, SC DHEC conducted an analysis of the air quality impact of a hot mix asphalt plant. The air sampling was conducted from June 5, 2008, (pre-operational) to October 28, 2009 (post-operational). Ambient air samples were analyzed for Volatile Organic Compounds (VOCs) [benzene, methyl chloroform toluene, and xylene], Semi-volatile Organic Compounds (polycyclic aromatic hydrocarbons (PAH), and alkanes), carbonyl compounds, and PM₁₀. Reference data from National Air Toxic Trend Sites (NATTS) were used for comparison and to provide context for measured concentrations.

Based on the data analysis, SC DHEC determined that the asphalt plant did not have a significant impact on typical daily and average ambient air concentrations of PM₁₀, VOCs, and carbonyl compounds at the monitoring location. Concentrations after the start of operations were similar to those reported at the NATTS reference sites. While there were increases in the ambient concentrations of naphthalene, some of the alkanes, and the PAH after the facility's operation began, the concentrations were well below the ambient standards. A copy of the study is available on visit our website at <http://www.dhec.sc.gov/PublicNotices/> page.

There was a question about spikes in emission levels in the study (Particulate Matter was mentioned specifically) depending on the time of day. While there may have been some “spikes” in PM during the study, all measured concentrations were well below the NAAQS. Based on modeling data, all emissions at the new facility will also be below the NAAQS limits.

Based on air dispersion modeling showing compliance with the ambient air standards, permit requirements to control emissions, and the previous monitoring study discussed above indicating compliance with the state and federal ambient air quality standards, SC DHEC does not believe additional ambient monitoring is needed at this time.

Cool Mix Asphalt - A comment referred to a previous request for the consideration of Cool Mix Asphalt alternatives.

SC DHEC must review the application that is submitted. Cold mix asphalt is typically only used for road repair and patches.

Hours of Operation Restrictions - A comment referred to a previous request to restrict the facility's hours of operation to Monday through Saturday, 7:00 am to 7:00 pm.

The permit limits annual production at an asphalt facility to ensure actual emissions are below the major source thresholds. Daily operating hours are not restricted unless a facility must limit its operations to demonstrate compliance with the ambient standards. Asphalt facility operations may take place at night based on customer requirements, such as the South Carolina Department of Transportation (SC DOT). SC DOT frequently conducts paving

in the evenings (or later) because there is less traffic. Asphalt must meet the required specifications (including temperature) when it arrives on site. This may require asphalt production at night in order to meet those SC DOT specifications. SC DHEC is unaware of any local ordinances limiting the hours of operation.

Water - A comment referred to a previous request for a pollution prevention plan and the assurance that well water would be continuously monitored to protect nearby residents.

SC DHEC is not aware of any groundwater contamination caused by asphalt plants. The well at the facility is a state defined public water system. An annual Coliform (bacteriological) sample is collected by Agency staff and analyzed at the local Environmental Affairs Regional Office in Myrtle Beach. A sanitary survey is conducted, which includes visual inspections of the well and well pad for contamination sources.

There was also a comment about water run-off. The facility was granted coverage under the SC DHEC's Bureau of Water (BOW) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Industrial Activities. The permit requires the development and implementation of a site-specific Storm Water Pollution Prevention Plan that addresses storm water run-off.

Public Health and Safety - A comment referred to a previous request that Southern Asphalt and SC DHEC give public health and safety priority over permitting timelines. A comment was also received about the health impacts of small particles.

State and federal air quality regulations are established to be protective of public health, using scientific data and human health risk assessments. These regulations include setting standards for ambient air and setting emission limits, controls and/or operational requirements for industrial facilities. The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) for six common pollutants ("criteria" pollutants) considered harmful to public health. There are two types of NAAQS: primary standards and secondary standards. Primary standards are set to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards are set to protect public welfare, such as protection against decreased visibility, and damage to animals, crops, vegetation, and buildings. National ambient standards have been set for the pollutant of concern from this project, particulate matter. Particulate matter (PM) consists of particulate matter less than 10 micrometers in diameter (PM₁₀) and particulate matter less than 2.5 micrometers in diameter (PM_{2.5}). The EPA is also required to designate areas of the country as nonattainment when monitoring information shows pollutant concentrations exceed a set standard. There are no nonattainment areas in South Carolina for PM₁₀ or PM_{2.5}. On a five-year schedule set by the CAA, the EPA reviews ambient standards, which includes a review of scientific and medical data. Based on that periodic review, standards may become more stringent. The

primary annual PM_{2.5} standard was strengthened from fifteen to twelve micrograms per cubic meter (µg/m³) in December 2012 to improve public health protection.

The EPA has not set national air quality standards for air toxics. South Carolina, however, has set ambient air toxic standards through SC Regulation 61-62.5, Standard 8 - Toxic Air Pollutants. Because of community concerns about impacts from asphalt facilities, SC DHEC has required each asphalt facility to demonstrate compliance with this standard prior to each construction permit issuance or relocation.

SC DHEC conducted an ambient monitoring study in 2008-2009 as outlined above to determine the impact of asphalt production on the local ambient air quality. The monitoring results did not indicate any significant change in the ambient air concentrations of the pollutants most likely associated with the operation of a hot mix asphalt plant and the measured concentrations did not approach the levels of health protective standards.

In February 2007, the United States Centers for Disease Control's Agency for Toxic Substances and Disease Registry (ATSDR) conducted an investigation (including a community in North Carolina) on the possible health impacts of asphalt plant emissions on communities (APAC CAROLINA INC. AND ASSOCIATED ASPHALT INC. JAKE ALEXANDER BOULEVARD, available at ATSDR's website <https://www.atsdr.cdc.gov>). The North Carolina study included air monitoring in addition to a data review around the asphalt plant. The ATSDR determined that emissions from asphalt plants in the area posed no short-term or long-term public health hazards.

State and federal regulations are set specifically to protect the health and welfare of the public and the environment. SC DHEC ensures that these protective standards can be met before issuing any air permit.

Twelve (12) Month Rolling Sums - A comment stated that the term "12 month rolling sum" and other aspects of the permit are confusing.

A 12-month rolling sum is a recordkeeping and reporting tool used to demonstrate continuous compliance with a permitted limit. Southern Asphalt is required to record 12-month rolling sums for production as follows:

- A 12-month rolling sum should be calculated for each month in the reporting period.
- There would never be two of the same month in the 12-month rolling sum total.
- As the 12-month period "rolls" forward each month, the amount from the latest month is added and one-year-old amount is subtracted.
- The result is a 12-month total that has rolled forward to the new month.

Installation of Larger Equipment - A comment stated that increased pollution output, resulting from the installation of larger equipment, is not acceptable.

Southern Asphalt has requested to construct and install larger equipment than was previously permitted. The old plant's equipment was capable of producing 225 tons per hour (TPH) of hot mix asphalt, while the new plant's equipment is capable of producing 350 TPH of hot mix asphalt. This results in a potential increase of 1,095,000 tons/year of hot mix asphalt.

Although, the new plant may produce more hot mix asphalt on a given day, like the old plant, the new plant will have the same permitted annual production limit of 1,220,000 tons of hot mix asphalt. Also, since the proposed plant is using newer equipment than the old plant, the new plant is expected to be cleaner and more efficient, resulting in fewer emissions overall due to advancements in technology.

Permit Denial - A comment requested SC DHEC to deny this permit due to health and safety impacts to the surrounding communities.

State and federal regulations are set specifically to protect the health and welfare of the public and the environment. SC DHEC ensures permits contains conditions that require facilities to meet the state and federal air quality standards. In accordance with Section 48-1-100(A) of South Carolina Pollution Control Act, SC DHEC must issue a permit if an applicant submits an application that meets all applicable standards.

Construction Activity - Comments were received about the use of the land across the street from Southern Asphalt.

The property in question is owned by Southern Asphalt Holdings, Inc. and is to be used for vehicle, equipment, and material storage. Public records indicate that the property is currently undergoing rezoning with Horry County. An application for rezoning was filed on October 26, 2017. Rezoning has been approved by the Planning Commission and requires three readings by Horry County Council. Rezoning is expected to be complete by mid-February of 2018. The property is being rezoned to the MA2 designation, which does not allow asphalt manufacturing or crushing.

Trust of Applicant - Comments were received regarding the trust of the applicant.

The monitoring, testing, recordkeeping, and reporting required in an air permit is the responsibility of the permitted company. The company may choose to hire and train employees to perform the requirements of the permit and/or hire an outside consulting firm to conduct the required monitoring, testing, recordkeeping, and reporting, SC DHEC does not direct how a company meets the requirements.

If a violation is discovered during a site visit or an inspection conducted by SC DHEC, it is referred to SC DHEC's Enforcement Section. The company may be asked to attend an enforcement conference with SC DHEC to discuss the alleged violations and note any areas

where corrective actions have been taken. During the conference, there is a discussion of the possible enforcement actions to include civil penalties, with the main goal being to aid the facility in getting back into compliance. The enforcement section then reviews similar cases and issues a decision consistent with those cases.

SC DHEC also has an Office of Criminal Investigations (OCI). Investigators are Class 1 Police Officers with statewide jurisdiction and they have been tasked with the criminal enforcement of violations of state law that directly impact the wellbeing of the citizens of South Carolina and SC DHEC. OCI is primarily responsible for investigating negligent, willful, and knowing violations of state and federal environmental laws.

Pursuant to the SC Environmental Audit Privilege and Voluntary Disclosure Law, a facility can self-report violations to SC DHEC. Self-reported violations are also evaluated by the Enforcement Section.

Compliance, Inspections and Reporting – Comments were received regarding the compliance, inspection, and reporting process.

Southern Asphalt is permitted as a conditional major facility. SC DHEC conducts unannounced inspections of all conditional major facilities at a minimum of every other year. SC DHEC may elect to inspect some facilities more frequently as warranted. During air quality inspections, all sources on the permit are inspected for compliance with the permit conditions. The inspector also reviews all records, logs, etc. for compliance with the permit. It is also noted if there are any inconsistencies between the permit and operation at the facility. Any alleged violations are detailed in the inspection report and referred to SC DHEC's Enforcement Section.

Air construction permits require a facility to certify that construction is complete in accordance with the construction permit conditions and to request an operating permit within 15 days after the actual date of initial startup. The inspectors will then verify that the equipment was constructed in accordance with the construction permit and is operating in accordance with its conditions. SC DHEC also conducts site visits for permitting and compliance assistance. If any violations are observed on these visits, they are referred to the Enforcement Section.

Southern Asphalt is required to submit 12-month production rolling sum reports and any baghouse pressure drop exceedances semiannually to SC DHEC's Technical Management Section. The facility has been in compliance with this permit condition.

Southern Asphalt is also required to perform an initial performance test for PM in accordance with 40 CFR 60 Subpart I and periodically test for PM emissions every two years in accordance with S.C. Regulation 61-62.1, Section IV. This test plan is reviewed for approval by SC DHEC's Source Evaluation Section. The test is typically performed by a consulting firm

hired by the facility and observed by the Source Evaluation Section. The Source Evaluation Section also reviews the test results to ensure they comply with all requirements. The current permitted facility has conducted the required testing and has shown compliance with the PM limits.

Zoning - Comments were received regarding the location of the facility.

All zoning decisions are made at the local level by a city or county zoning authority. In accordance with Section 48-1-100(A) of South Carolina Pollution Control Act, SC DHEC must issue a permit if an applicant submits an application that meets all applicable standards.

SC DHEC does, however, participate in the Waccamaw Air Quality Coalition (<http://wrcog.org/transportation-planning/air-quality-coalition/>), which includes representatives of industry, academia, the Waccamaw Regional Council of Governments, and other concerned citizens. This coalition is a great opportunity for people interested in air quality to meet and discuss their concerns. For more information, contact the Waccamaw Air Quality Coalition at (843) 546-8502.

Odor - Comments were received regarding odors from the facility.

There are no state or federal odor regulations. However, SC DHEC's regional offices investigate citizen complaints, including odor complaints. SC DHEC encourages the commenter to contact the regional office whenever the odor is detected so that they can investigate and potentially locate the cause. The presence of odor does not necessarily signal the presence of dangerous air pollution. Many air pollutants have an odor threshold far below the level that would cause harm. The ATSDR investigated the potential health impact of asphalt emissions on communities located near hot mix asphalt plants. According to their study, asphalt plants may create odors that cause some irritation in sensitive people, but not long-term health problems. Please go to *APAC CAROLINA INC. AND ASSOCIATED ASPHALT INC. JAKE ALEXANDER BOULEVARD*, available at the ATSDR's website <http://www.atsdr.cdc.gov> for more information on the study.

Noise – Comments were received regarding the potential impacts of noise pollution to the area and to animals. Requests were made for the installation of noise abatement structures and a noise reduction plan.

SC DHEC does not have any noise standards in the air quality regulations and therefore no authority to regulate or base a permit decision on noise levels. In Horry County, noise control is addressed by Ordinance No. 78-17, Chapter 13, Article III.

Permit Decision –A comment was also received asking if SC DHEC has decided to push forward with the permit.

After consideration and a complete review of the air permit application and supplemental information, applicable state and federal air quality regulations, comments and concerns made at the public meeting, all other comments received within the required time frame, and all other pertinent information, SC DHEC has determined it has sufficient information to grant a permit.

Final Agency Decision- The decision of SC DHEC becomes the final agency decision fifteen (15) calendar days after notice of the decision has been mailed to the applicant, permittee, licensee, and affected persons who have requested in writing to be notified, unless a written request for final review accompanied by a filing fee in the amount of \$100 is filed with SC DHEC by the applicant, permittee, licensee or affected person.

The complete "Guide to Board Review" can be found at the following web address:
<http://www.scdhec.gov/Agency/BoardofDirectors/GuidetoBoardReview/>